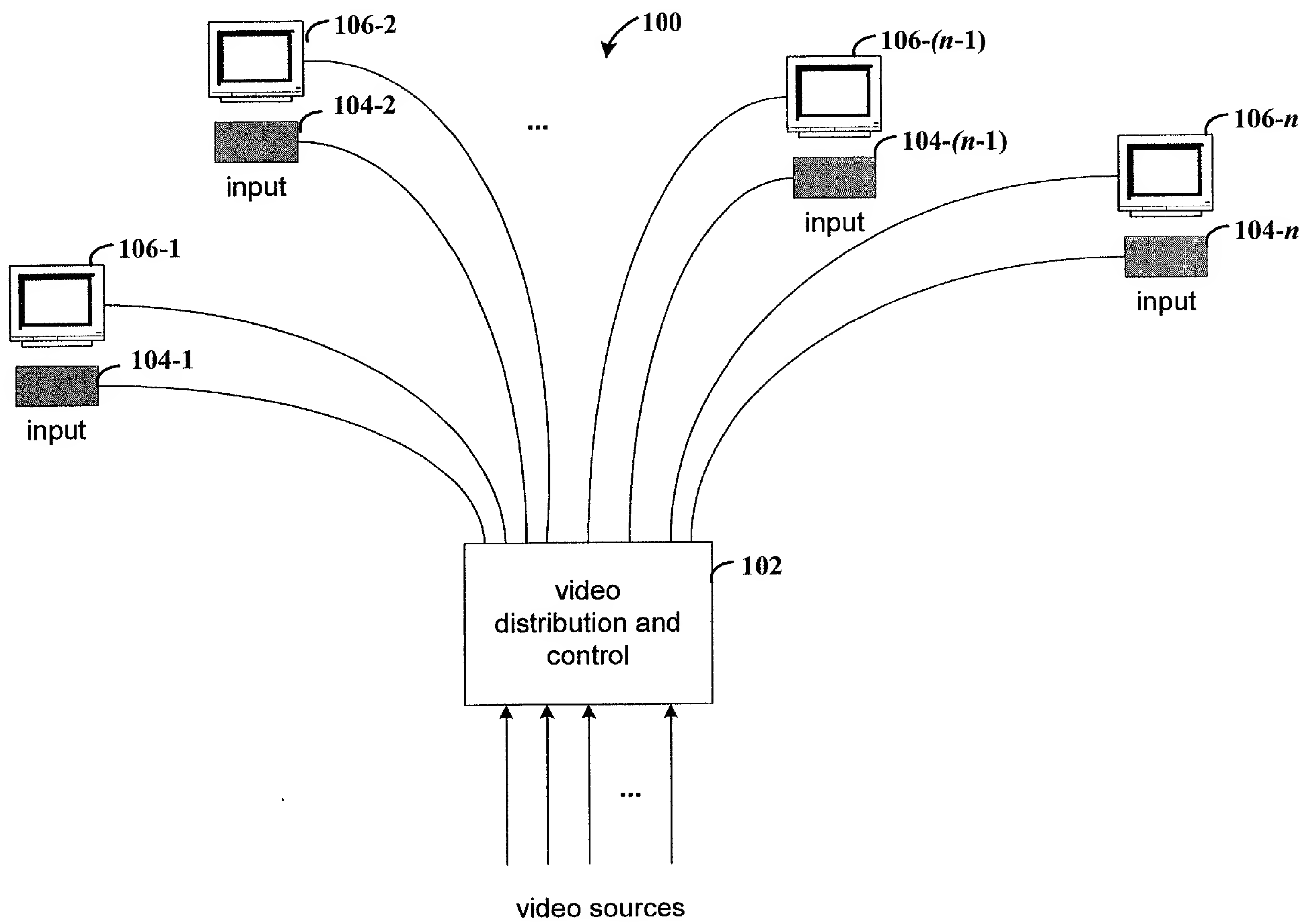
100
106-2
104-2
input
106-1
104-1
input
...
106-(n-1)
104-(n-1)
input
106-n
104-n
input
video
distribution and
control
102
...
video sources

FIG. 1

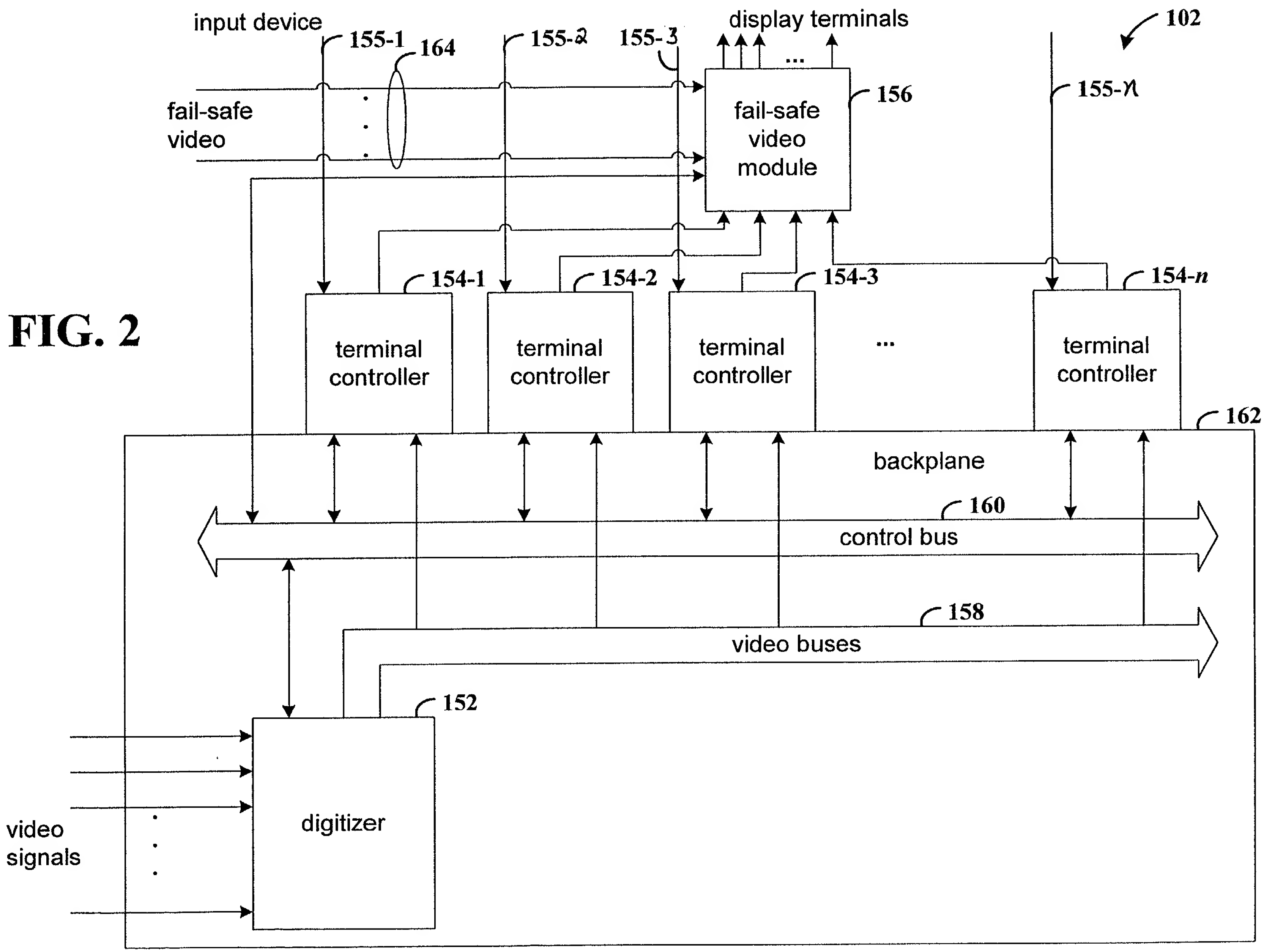
input device
155-1
164
155-2
155-3
display terminals
...
102
fail-safe video
fail-safe video module
156
155-n
154-1
154-2
154-3
154-n
terminal controller
terminal controller
terminal controller
...
terminal controller
162
backplane
160
control bus
158
video buses
152
video signals
digitizer

FIG. 2

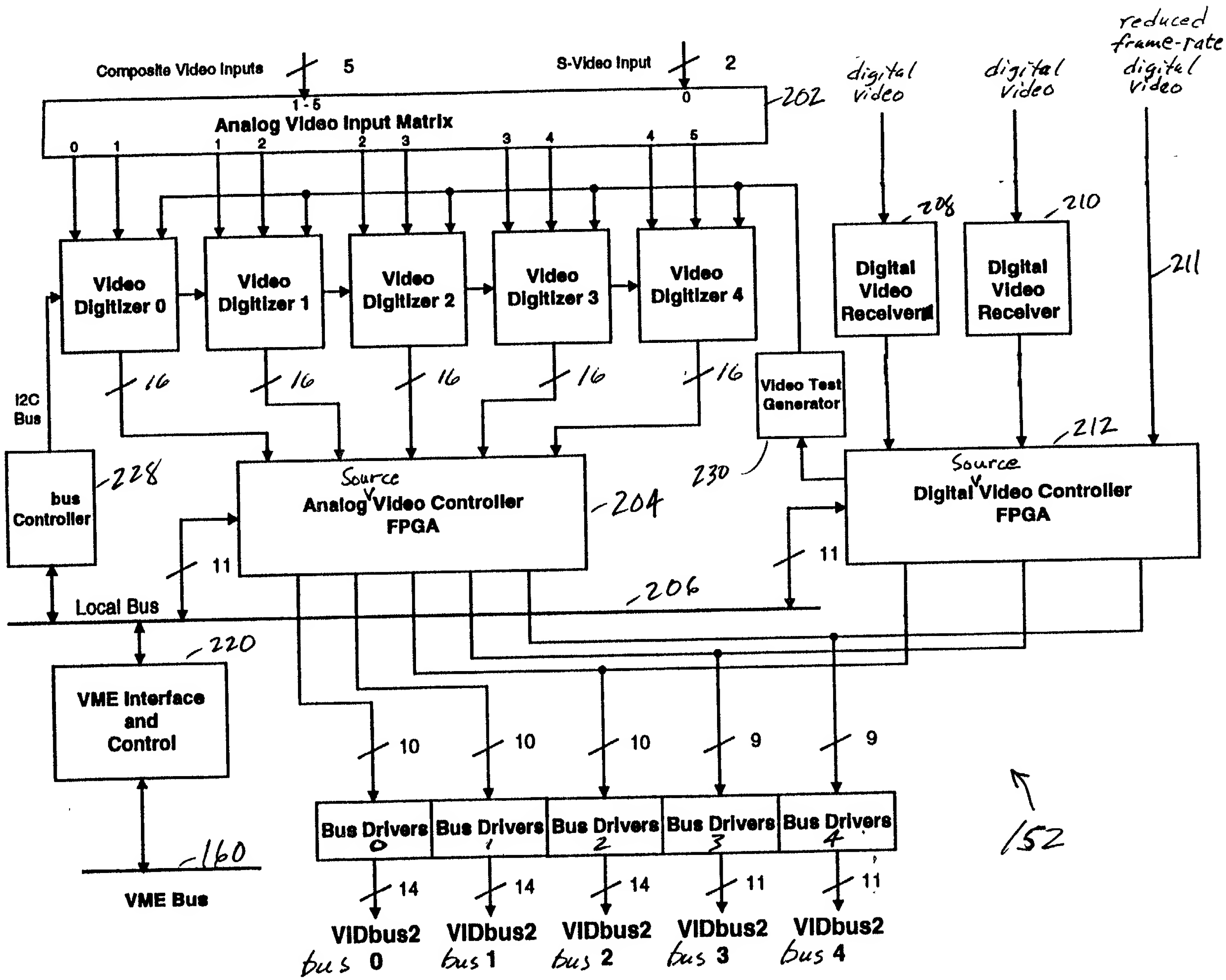
Composite Video Inputs
5
S-Video Input
2
Analog Video Input Matrix
202
Video Digitizer 0
Video Digitizer 1
Video Digitizer 2
Video Digitizer 3
Video Digitizer 4
Digital Video Receiver
208
Digital Video Receiver
210
digital video
digital video
reduced frame-rate digital video
211
16
I2C Bus
bus Controller
228
Source Analog Video Controller FPGA
204
Video Test Generator
230
Source Digital Video Controller FPGA
212
11
Local Bus
206
VME Interface and Control
220
VME Bus
160
10
9
Bus Drivers 0
Bus Drivers 1
Bus Drivers 2
Bus Drivers 3
Bus Drivers 4
14
VIDbus2 bus 0
VIDbus2 bus 1
VIDbus2 bus 2
VIDbus2 bus 3
VIDbus2 bus 4
152

FIG. 3

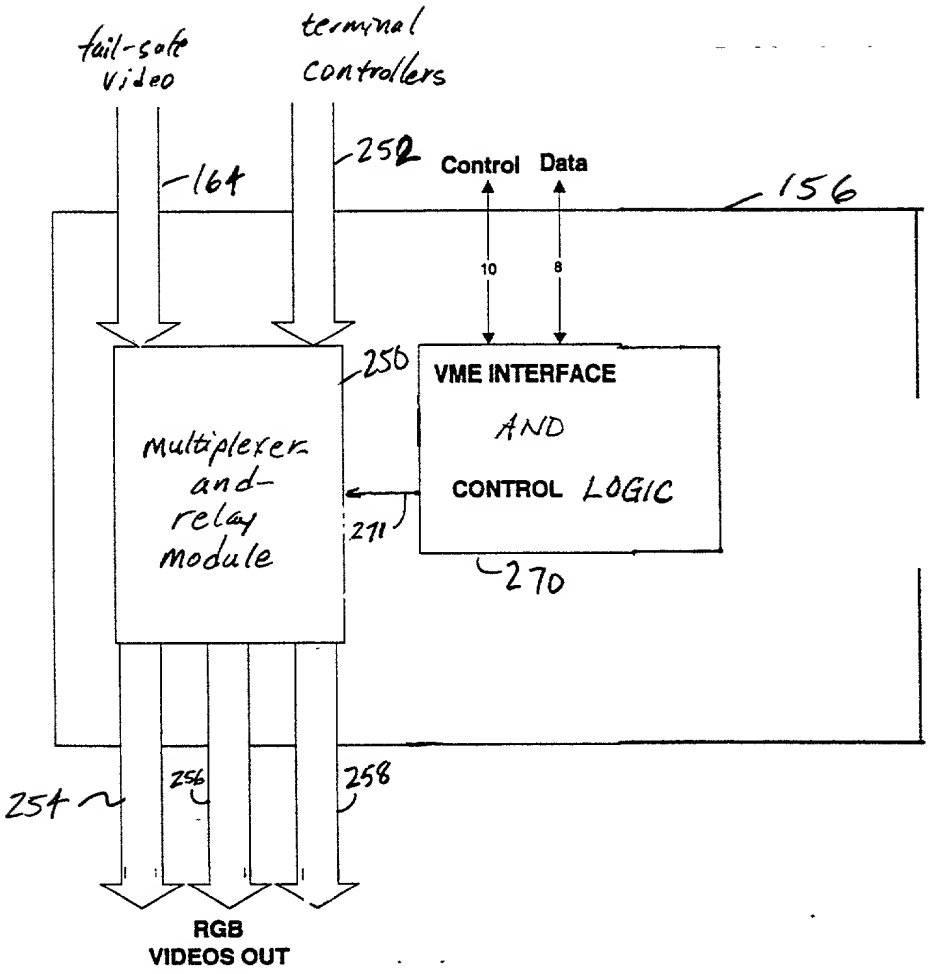
tail-sole video
terminal controllers
164
252
Control
Data
156
10
8
250
VME INTERFACE
AND
CONTROL LOGIC
multiplexer and relay module
271
270
254
256
258
RGB
VIDEOS OUT

FIG. 4

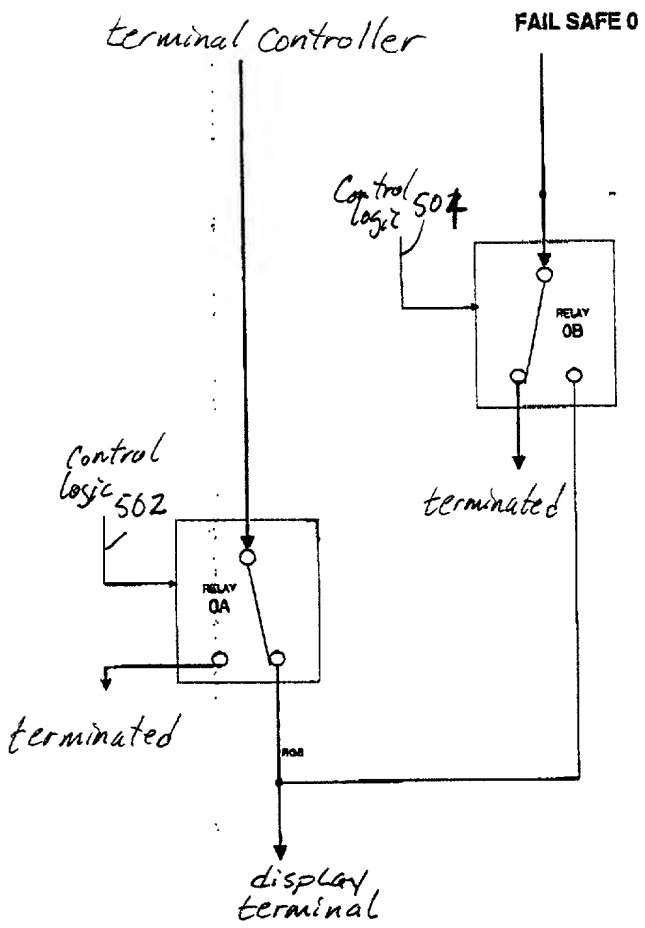
terminal controller
FAIL SAFE 0
Control logic 504
RELAY 0B
terminated
Control logic 502
RELAY 0A
terminated
display terminal

FIG. 5

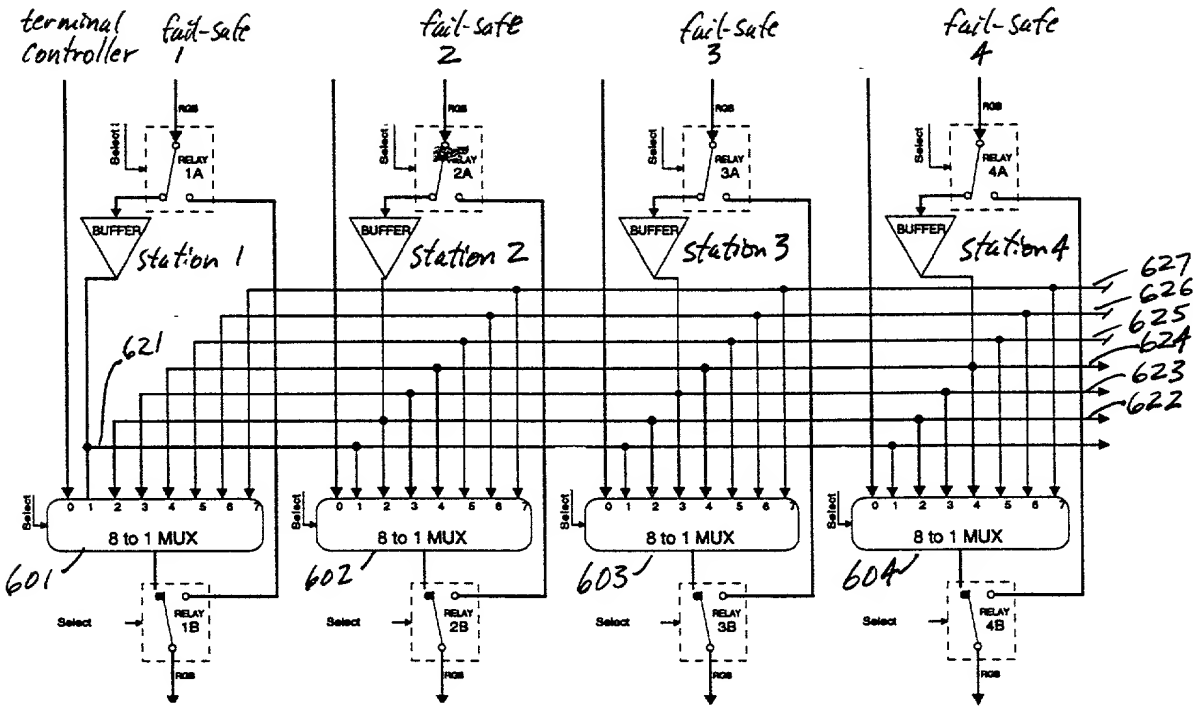
terminal controller
fail-safe 1
fail-safe 2
fail-safe 3
fail-safe 4
RELAY 1A
RELAY 2A
RELAY 3A
RELAY 4A
BUFFER
Station 1
Station 2
Station 3
Station 4
621
627
626
625
624
623
622
8 to 1 MUX
601
602
603
604
RELAY 1B
RELAY 2B
RELAY 3B
RELAY 4B

FIG. 6A

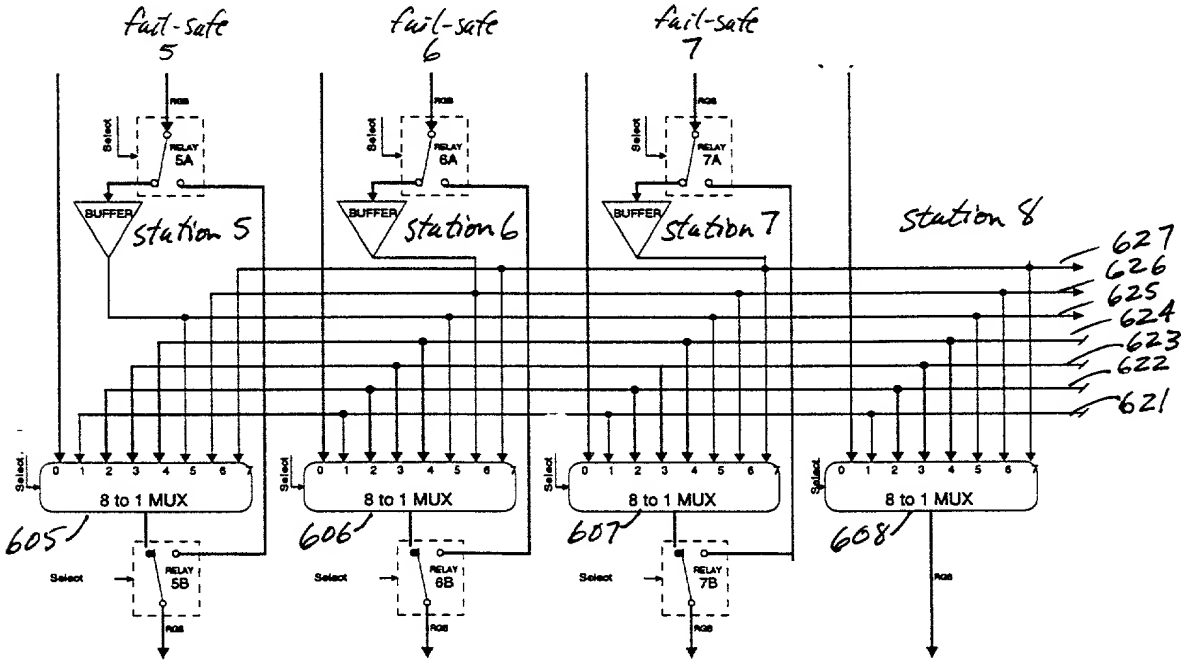
fail-safe 5
fail-safe 6
fail-safe 7
RELAY 5A
RELAY 6A
RELAY 7A
BUFFER
Station 5
Station 6
Station 7
Station 8
627
626
625
624
623
622
621
8 to 1 MUX
605
606
607
608
RELAY 5B
RELAY 6B
RELAY 7B

FIG. 6B